



## ● This Month's Question of the Month

An appeal of an electrical citation must be received by the department within \_\_\_\_ days, along with the appropriate appeal fee, after the notice of penalty has been sent. **A) 10, B) 20, C) 30, D) 45.**  
*See the correct answer on page 2.*

## ● Note From The Chief

We are regrouping after our recent layoffs and evaluating all aspects of the Electrical Program to achieve the highest level of efficiency and effectiveness with our limited resources. We are maximizing our inspection response by better grouping the inspectors' daily work. Some inspections may take longer if the job is remote and has no other inspections close by.

Even after the March 31<sup>st</sup> layoff, we made 93% of all inspections within 2 days after receiving the inspection request and 80% within 1 day after the inspection request was made. Inspectors work hard each day to keep up with the huge demands of their jobs. You can help them by getting your jobs done correctly – without corrections – and planning ahead to make sure we have access to inspect your job so that your request does not turn into an emergency.

We will continue to improve what is one of, if not the best, Electrical Program in the nation. The program's improvements, innovations, and hard work of recent years will continue to pay off with quality service for all our customers – electrical contractors and consumers – and make Washington an even safer place to live and work.

## ● DC Water Pumps and Controllers

Rural installations of small water pumping systems using direct-current pumps and controllers are being installed in Washington. Often, these pumps are powered by solar photovoltaic or wind turbine systems. This type of direct-current pump and controller does not have a U.L. standard and are not listed by any electrical testing laboratory. Because a standard is not available for the direct-current pump and controller listing or field evaluation is not possible, consequently the department will accept the pump and controller as supplied by the manufacturer.

The lack of standards for these direct current pumps/controllers presents an unavoidable Buyer Beware situation. All other components of the installation, charge controller, PV system, wind turbine, etc., must be appropriately listed, field evaluated, or if applicable, labeled by an approved engineer. The electrical inspector will inspect the entire installation as required in RCW 19.28.101.

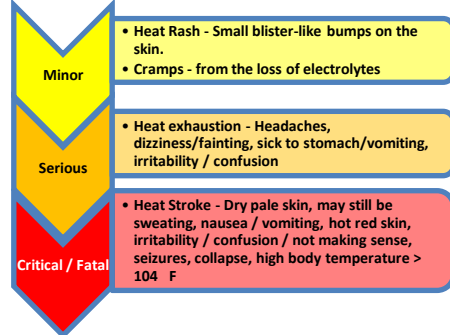
## ● Good Job Descriptions Equal Quicker And Better Inspections

The electrical inspectors continue to receive inspection requests with very poor descriptions of the work to be inspected and directions to the jobsite address. Help your inspector to quickly find your jobsite and the exact work to be inspected so that you will receive quicker and more accurate inspections. The following are actual job descriptions received on permits: "extend circuit," "structural," "run a circuit," "homeowner request," "circuit to heat pump," "add outlet in master bathroom," "wiring in new barn." Can you tell the difference? The first three are virtually useless to the inspector. The last three are clear and will enable the inspector to quickly find the work to be inspected.

Like the job description, it is equally important to provide good directions to your jobsite. Here are some examples of bad and good directions: "near Pinto Ridge Rd and Hwy 28," "Hwy 20," "on right, 1/2 mile south of Hwy 14 on Stonehenge Dr," "NW corner of Hactor Rd. and W. Loop Dr." As with job descriptions, it is easy to tell the difference between good and bad instructions. Help yourself by helping the inspector.

### Safety Tip of the Month!

Summer is near; stay hydrated and avoid extreme heat conditions. Heat related illness ranges from mild to potentially fatal.



## ● Fee Training Series – Single/2-Family Residential Existing Structures And Systems And Multifamily Dwellings

This is the second in a series of articles on selecting the appropriate permit fees for your work. WAC 296-46B-906(1), Residential, is separated into six sections. Paragraphs (b), (c), (d) are the primary sections to use when determining the permit fees for changes to your existing single, 2-family, and new or existing multi-family residential electrical project.

Paragraph (b) covers multi-family residential and miscellaneous residential structures not included in paragraph (a). This includes: new apartment buildings and other residential structures that do not serve a direct accessory function to a single or 2-family residence like: shop, agricultural, hobby, personal aircraft hangers, separate apartments, etc. that do not serve a direct accessory function to the single or 2-family residence.

The fees in paragraph (b) are based upon the service/feeder size. For instance, in a multi-family building that has an 800 ampere service with two 400 ampere feeders supplying eight 100 ampere feeders would have a total permit fee of \$479.20 (i.e. the largest 800 ampere service/feeder (\$181.20) plus two additional 400 ampere feeders ( $2 \times \$50.60 = \$101.20$ ) plus eight additional 100 ampere feeders ( $8 \times \$24.60 = \$196.80$ ) equals a total fee of \$479.20). This fee includes all the building's branch circuits and is large enough to allow for no more than twelve ½ hour progress inspections.

For a new miscellaneous residential structure that does not serve a direct accessory function to a single or 2-family structure, you should use the same method to calculate your fees. For instance, for a new single family residence with a new horse barn being supplied by a 100 ampere feeder from the house, use paragraph (a) as described last month to calculate the fee for the house and use paragraph (b) to calculate the fee for the 100 ampere feeder to the barn. The barn feeder will cost \$82.70 in addition to the fee for the house.

Paragraph (c) should be used to calculate the fees for single, 2-family, or multi-family altered services or feeders. The fees in paragraph (c)(i) for altered services/feeders are similar to those in paragraph (b) for new installations. For instance, to replace a 200 ampere residential service, the fee is \$70.30. To replace an 800 ampere multi-family service with two 400 ampere feeders the fee is \$360.60 (i.e. 800 ampere service (\$155.00) plus two 400 ampere feeders ( $2 \times \$102.80 = \$205.60$ ) equals \$360.60). This fee includes all the branch circuits supplied directly by the service and the two feeders and is large enough to allow for no more than nine ½ hour progress inspections. The fee in paragraph (c)(ii) should be used when the only repair is to the meter and/or mast and there are no alterations necessary to the service or feeder supplied through that meter and/or mast. This is a flat rate fee of \$38.10 regardless of the amperage.

Paragraph (d) should be used for circuit additions in areas where the building and other circuits already exist. The most common usage is when adding outlets to existing circuits or when adding circuits in an existing area or where the circuit already exists (e.g. bonus room with existing circuit available to supply the room). For instance, when adding outlets onto four different circuits supplied from a single panelboard, the fee is \$50.60. If the outlets are being added onto five different circuits supplied from a single panelboard, the fee is \$56.10 (i.e. first four circuits (\$50.60) plus fifth circuit (\$5.50) equals \$56.10). When adding outlets to onto four different circuits supplied from two panelboards, the fee is \$50.60 per panelboard for a total fee of \$101.20. When more than four circuits to a panelboard are altered, add \$5.50 per circuit as described in the previous example.

If the paragraph (d) fee equals or exceeds the fee for the panelboard containing the altered circuits, you should use the fee in paragraph (c) instead of (d) for those circuits. For instance, you are adding outlets to 20 circuits in a 200 ampere panelboard. Using paragraph (d), the fee would be \$138.60 (i.e. 1<sup>st</sup> four circuits (\$50.60) plus 16 circuits ( $\$5.50 \times 16 = \$88.00$ ) equals \$138.60). Using paragraph (c) for a 200 ampere panelboard, including all circuits, the fee is \$70.30. Since the fee calculated in (d) - \$138.60 - is greater than that calculated in (c) - \$70.30 - your final fee should be the lower fee calculated in paragraph (c) of \$70.30. Paragraph (d) should not be used when the area being wired is new square footage (e.g. additions, bump outs, attic remodels, bonus room without available circuit, etc.) or there is not existing circuit available for supplying the area. The fees, for additions that add square footage to the original house, should be calculated using the square footage in paragraph (1)(a).

## ● Answer to This Month's Question of the Month:

D) 20 (see RCW 19.28.131)

Electrical Section Internet Address: <http://www.Lni.wa.gov/TradesLicensing/electrical>

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